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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,326	03/12/2004	Narendra S. Yadav	CL1806USCIP	9215

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WILMINGTON, DE 19805

EXAMINER

ZHENG, LI

ART UNIT	PAPER NUMBER
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1638

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/799,326

Applicant(s)

YADAV ET AL.

Examiner

Li Zheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6 and 58-67 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,6 and 58-66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment to claim 67, and amendments to the specification filed on 12/21/2007 are acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The rejections of claim 67 under 35 U.S.C. 112 first paragraph for both written description and enablement are withdrawn due to claim amendment.
4. The rejection of claim 67 for double patenting is withdrawn in light of the terminal disclaimer filed on 12/21/2007.

Specification

5. The objection to the specification is maintained. Submission of a substitute specification with markings showing amendments that obviate the objection is acknowledged. However, Applicants have not complied with the rules of substitute specification submission, which also includes providing an unmarked copy of the

substitute specification and a statement that new matter is not included. See 37 CFR 1.125.

Claim Objections

6. Claim 67 remains objected to since there is still a typographical error in recitation, "set for the", in line 6.

Claim Rejections - 35 USC § 103

7. Claim 67 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Wu et al. and Whitelam et al., for the reasons of record stated in the Office action mailed June 23, 2006. Applicants traverse in the paper filed December 21, 2006. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that the references do not teach the use of a split intein for transplicing proteins in plants and that at best the combination of the cited reference may suggest that the present invention was obvious to try (the second paragraph from the bottom of page 5). The examiner disagrees. It is clearly stated by Chen et al that the goal for the research is to control the transgene spread via pollen by expressing those two inactive fusion proteins from separate DNA locations, such as nuclear and chloroplast genome (see last sentence in abstract). Chen et al. further address in detail

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the advantage of using intein-mediated protein complementation (IPC) to reconstitute herbicide resistance from a genetically divided EPSPS protein in plant (the paragraph bridging left column and right column of page 47, and also Fig. 6). In contrast to Applicant's conclusion that the reference may simply suggest the instant invention is obvious to try, the work of Chen et al. performed in E.coli is designed as a proof of concept step for the ultimate use in plant. In addition, Chen et al. also provide guidance as to how to apply the method of Chen et al. to plants (the paragraph bridging left column and right column of page 47, Fig. 6, and also last two paragraphs of the right column of page 47). Given that EPSPS gene is routinely used as a selection marker for plant transformation, and that it is well known in the art to expression genes in nuclear genome and genomes in organelles such chloroplast genome in plant, a person with ordinary skill in the art would reasonably expect that the proposed application of the method in plant by Chen et al. is likely to be successful.

Applicants further argue that Wu is silent with respect to methods by which intein may be used in plant and that Wu's disclosure is limited to E. coli (the paragraph bridging pages 5-6). However, the reference of Wu et al. is only used to demonstrate that the IntN of Ssp DnaE intein used by Chen et al. contains motifs set forth by SEQ ID NO: 77 and 78.

Applicants finally argue that the Applicants are the first to move the teaching from the theoretical to practical, and that although Chen and Wu appear to suggest that one of the primary utilities of the described technology is to effect transplicing of proteins in plant, neither author has subsequently published on a method for accomplishing the

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same, suggesting that the skilled person would not find implementation of this suggestion obvious (the paragraph bridging pages 5-6). The examiner disagrees on Applicants' conclusion/suggestion that the skilled person would not find implementation of this suggestion obvious due to the lack of subsequent publication on proposed application, because there could be numerous reasons other than the one that Applicants suspect.

Summary

Claim 67 is rejected.

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

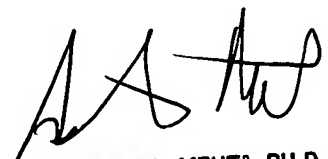
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031. The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ASHWIN D. MEHTA, PH.D.
PRIMARY EXAMINER

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